

### **REMARKS**

Claims 1-6 and 29-50 were presented for examination and were rejected.

The applicants have amended claim 1 to incorporate the features of former claims 4 and 32, and for which there is additional basis on page 2, lines 15 through 17 and page 3, lines 1 through 3 of the original application. Accordingly, the applicants have canceled claims 4 and 32, without prejudice, and reserve the right to re-add the canceled claims to this or another application.

Other claims have also been amended, as discussed in the relevant sections below.

The applicants respectfully request reconsideration in light of the amendments and the following comments.

#### **Objection to the Drawings**

The drawings were objected to because they failed to show the dimensional qualities of the internal formations and accurately display the first and second surfaces as described in the specification.

The agent of record, Kenneth Ottesen, explained in a voice mail message left for Examiner Tanner on August 21, 2008 that the first and second surfaces are shown in Figure 2, as items 4 and 5, and Figure 3, as items 13 and 14. Examiner Tanner responded in a voice mail message left on August 22, 2008 that she has looked again at the application with respect to the drawings objections, understands the drawings with respect to the items in question, and as a result has withdrawn the drawings objections.

#### **Double Patenting Rejection of Claims 1, 39, 40, and 42**

Claims 1, 39, 40, and 42 have been rejected under the doctrine of obviousness double-patenting as being unpatentable over claims 21, 29, and 30 of co-pending U.S. Application No. 10/300,298 in view of Houston et al (EP 1254645).

The applicants have amended claim 1, but have done so solely for the purpose of overcoming the 102 rejection discussed below. Nevertheless, since amended claim 1 incorporates the subject matter of former claim 4 and 32, the double-patenting rejection is now moot. And since claims 39, 40, and 42 depend on claim 1, the double-patenting rejection is also now moot for those claims as well.

**Double Patenting Rejection of Claims 1, 39, and 40**

Claims 1, 39, and 40 have been rejected under the doctrine of obviousness double-patenting as being unpatentable over claims 5, 6, and 21 of U.S. Patent No. 6,776,194 in view of Houston et al (EP 1254645).

The applicants have amended claim 1, but have done so solely for the purpose of overcoming the 102 rejection discussed below. Nevertheless, since amended claim 1 incorporates the subject matter of former claims 4 and 32, the double-patenting rejection is now moot. And since claims 39 and 40 depend on claim 1, the double-patenting rejection is also now moot for those claims as well.

**Claims Objections**

Claim 35 is objected to because the claim is a sentence fragment. The applicants have amended the claim to overcome the objection.

Claim 47 is objected to because it depends on canceled claims. The applicants have amended the claim to be dependent on claim 1.

**35 U.S.C. 112 Rejection of Claim 31**

Claim 31 has been rejected under 35 U.S.C. 112, Second Paragraph. Amended claim 31 recites:

**31.** An internal formation according to claim 1, wherein the first surface subtends *with* the diameter of the conduit extending through the portion of the profile *of the longitudinally extending member* closest to the centre of the conduit at a smaller angle than the second surface subtends *with* the diameter of the conduit.

*(emphasis supplied)*

With respect to claim 31, regarding the term "the profile," the applicants have replaced it with the term "the profile of the longitudinally extending member closest to the centre of the conduit," for which there is antecedent basis already established in claim 1. Regarding the concept of how a surface "subtends a diameter," the applicants have amended the claim to read "subtends with the diameter." This concept can be seen in Figure 2 and page 5, lines 6 through 18 (in particular lines 10 through 12) of the description of the instant application. Specifically, angles are defined by the first surface subtending with the diameter and by the second surface subtending with the diameter.

With respect to claim 47, the applicants have amended claim 47 to overcome the related objection, as described earlier.

With respect to claim 50, the applicants have amended the claim and have added new claims 51 and 52, in order to overcome the rejection.

The applicants submit that claims 31, 47, and 50 as amended overcome the rejection.

**35 U.S.C. 102 Rejection of Claims 1-6, 29-37, 39-48, and 50**

Claims 1-6, 29-37, 39-48, and 50 were rejected under 35 U.S.C. 102(b) as being anticipated by Houston et al (EP 1254645, hereinafter "Houston"). The applicants respectfully submit that the claims as amended overcome the rejection.

Amended claim 1 recites:

**1.** An internal formation for a conduit, the formation comprising a longitudinally extending member adapted to extend along an inside surface of at least a portion of the length of the conduit, the longitudinally extending member having an asymmetric profile in a direction transverse of the longitudinal axis of the member, wherein a first surface of the longitudinally extending member is at least partially directed towards an inlet of the conduit and a second surface of the longitudinally extending member is at least partially directed towards the outlet of the conduit and wherein the angle that the first surface subtends with a diameter of the conduit extending through a portion of the profile of the longitudinally extending member closest to the centre of the conduit is less than 20°.

*(emphasis supplied)*

Nowhere does Houston teach or suggest, alone or in combination with the other references, what amended claim 1 recites—namely an angle that the first surface subtends with the diameter of the conduit as being less than 20°.

As mentioned earlier, the applicants have amended claim 1 to incorporate the features of former claim 32. Section 20 of the pending Office action states that claim 32 was anticipated by Houston on the grounds that "Houston discloses an angle that the first surface subtends with the diameter of the conduit to be 16°." However, the Office appears to have misunderstood the disclosure of Houston. It is the ridging 12 in Houston that corresponds to the "longitudinally extending member" of claim 1 of the instant application since the longitudinally extending member is "adapted to extend along an inside surface....of the conduit". Referring to Figure 1 of Houston, it is clear that the tube 11 of Houston corresponds to the "conduit" of pending claim 1 and the ridging 12 corresponds to the "longitudinally extending member" of claim 1.

The Office action refers to the passage in Houston in column 6, lines 28 to 30 which refers to the helix angle of the ridging 12 (see column 6, lines 14 and 15). The "helix

angle" is the angle between the ridging 12 and the axis of the tube 11 (this is the standard meaning of the term "helix angle"). Thus, the helix angle of the ridging 12 is an indication of how tightly wound the ridging is within the tube (*i.e.*, how many revolutions of the tubing 11 each ridge makes per unit length of the tubing 11). The helix angle referred to in Houston is in no way related to the angle referred to in amended claim 1 which, as can be seen from Figure 2 of the present application (see angle 8), represents the angle between the leading face 4 and the diameter of the conduit that extends through the cross-sectional profile of the longitudinally-extending member that is closest to the center of the conduit. Indeed, there is no counterpart to this angle in Houston because the sides of the ridging 12 (what the Office action refers to as the first and second surfaces in the illustration introduced on page 10 of the Office action) are effectively perpendicular to the diameter.

In any case, the passage in column 6, lines 28 to 30 of Houston, is certainly not disclosed in relation to the angle which is referred to in pending claim 1. The applicants would also add that Houston does not disclose the provision of a longitudinally-extending member having "an asymmetric profile" since in Houston the profile of the longitudinally extending member is instead symmetric.

For these reasons, the applicants respectfully submit that the rejection of claim 1, as amended, is overcome.

Because claims 2-6, 29-37, 39-48, and 50 depend on claim 1, the applicants respectfully submit that the rejection of them is also overcome.

### **35 U.S.C. 102 Rejection of Claims 1-4, 36-39, 45-47, and 49**

Claims 1-4, 36-39, 45-47, and 49 were rejected under 35 U.S.C. 102(b) as being anticipated by Jansen (US Patent No. 5,992,465, hereinafter "Jansen"). The applicants respectfully submit that the claims as amended overcome the rejection.

Nowhere does Houston teach or suggest, alone or in combination with the other references, what amended claim 1 recites—namely an angle that the first surface subtends with the diameter of the conduit as being less than 20°.

As mentioned earlier, the applicants have amended claim 1 to incorporate the features of former claim 32. The Office did not apply the current rejection in relation to former claim 32. And since amended claim 1 incorporates that subject matter of former claim 32, the rejection of claim 1 is overcome.

Because claims 2-4, 36-39, 45-47, and 49 depend on claim 1, the applicants respectfully submit that the rejection of them is also overcome.

**35 U.S.C. 103 Rejection of Claim 34**

Claim 34 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Houston (EP 1254645).

Claim 34 is dependent on claim 1. And the 102 rejection of claim 1 with respect to Houston has been overcome, as discussed above. Therefore, the applicants respectfully submit that the rejection of claim 34 has also been overcome.

**35 U.S.C. 103 Rejection of Claim 49**

Claim 49 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Houston (EP 1254645) in view of Jansen.

Claim 49 is dependent on claim 1. And the 102 rejection of claim 1 with respect to Houston has been overcome, as well as the 102 rejection of claim 1 with respect to Jansen, as discussed above. Therefore, the applicants respectfully submit that the rejection of claim 49 has also been overcome.

**Request for Reconsideration Pursuant to 37 C.F.R. 1.111**

Having responded to each and every ground for objection and rejection in the pending Office action, applicants respectfully request reconsideration of the instant application pursuant to 37 CFR 1.111 and request that the Examiner allow all of the pending claims and pass the application to issue.

If there are remaining issues, the applicants respectfully request that Examiner telephone the applicants' attorney so that those issues can be resolved as quickly as possible.

Respectfully,  
John Graeme Houston et al.

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